IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method of compensating for sampling frequency offset in an OFDM receiver which samples a received multicarrier signal and performs a Fourier Transform on the sampled signal to extract data therefrom, the method comprising:

performing a separate Fourier Transform on the sampled signal, the separate Fourier Transform being a partial and/or reduced Fourier Transform to derive phase values for at least two points thereof; and

compensating for the sampling frequency offset in dependence on a difference between phase variations at the respective points, each phase variation representing a difference between the phase value derived for that point and further phase data.

Claim 2 (Canceled)

3. (Previously Presented) A method as claimed in claim 1, wherein each phase variation represents the difference between phases at two parts of an OFDM symbol which includes a guard space, the two parts being separated by an interval corresponding to a useful part of the symbol.

4. (Previously Presented) A method as claimed in claim 3, wherein one part is at an end of the guard space.

5. (Original) A method as claimed in any preceding claim, wherein the separate Fourier Transform is a reduced Fourier Transform.

6. (Previously Presented) A method as claimed in claim 1, wherein each of the two points of the separate Fourier Transform corresponds to a respective pilot signal,

each phase variation representing the difference between the determined phase value for the point and the expected phase value of the respective pilot signal.

7. (Previously Presented) A method as claimed in claim 1, including performing the compensation for the sampling frequency offset in dependence on phase values measured over a plurality of OFDM symbols.

8. (Previously Presented) A method as claimed in claim 1, wherein the separate Fourier Transform is a partial Fourier Transform.

9. (Original) A method as claimed in claim 8, wherein the partial Fourier Transform is performed using Goertzel's algorithm.

10. (Previously Presented) A method as claimed in claim 1, wherein the phase values for said points are calculated only in response to selected samples of the received signal.

11. (Previously Presented) A method as claimed in claim 1, wherein the compensation for the sampling frequency offset is performed by adjusting the sampling frequency.

12. (Previously Presented) A method as claimed in claim 1, wherein the compensation for the sampling frequency offset is performed by controlling interpolation of the sampled signal.

13. (Previously Presented) A method of synchronizing an OFDM receiver, the method comprising:

compensating a sampling frequency offset of the OFDM receiver using a method as claimed in claim 1; and

compensating for a local oscillator-frequency offset in dependence upon the phase variation for at least one of said points.

Claims 14-15 (Canceled)

16. (Previously Presented) A method as claimed in claim 22, wherein the phase variation represents a difference between two parts of an OFDM symbol which includes a

guard phase, the two parts of the OFDM symbol being separated by an interval corresponding to a useful part of the symbol.

17. (Previously Presented) A method as claimed in claim 16, wherein one part is at an end of the guard space.

18. (Previously Presented) A method as claimed in claim 22, wherein the separate Fourier Transform is a reduced Fourier Transform.

19. (Previously Presented) A method as claimed in claim 22, wherein said point of the separate Fourier Transform corresponds to a pilot signal,

each phase variation representing a difference between a determined phase value for the point and an expected phase value of the respective pilot signal.

20. (Previously Presented) A method as claimed in claim 22, including performing the compensation of the local oscillator frequency offset in dependence on phase values measured over a plurality of OFDM symbols.

Claim 21 (Canceled)

22. (Currently Amended) A method of compensating for a local oscillator frequency offset in an OFDM receiver which samples a received multicarrier signal and performs a Fourier Transform on the sampled signal to extract data therefrom, the method comprising:

performing a separate Fourier Transform on the sampled signal, the separate Fourier Transform being a partial ~~and/or reduced~~ Fourier Transform to derive a phase value for at least one point thereof;

deriving for said point a phase variation representing a difference between the phase value for said at least one point and a further phase value; and

compensating for the local oscillator frequency offset in dependence on the phase variation,

wherein the partial Fourier Transform is performed using Goertzel's algorithm.

23. (Previously Presented) A method as claimed in claim 22, wherein the phase value for said point are calculated only in response to selected samples of the received signal.

24. (Previously Presented) A method as claimed in claim 22, wherein the compensation for the local oscillator frequency offset is performed by adjusting the local oscillator frequency.

25. (Previously Presented) A method as claimed claim 22, wherein the compensation for the local oscillator frequency offset is performed by phase rotation of received and sampled signals.

26. (Previously Presented) A method of synchronising an OFDM receiver which samples a received multicarrier signal and performs a Fourier Transform on the sampled signal to extract data therefrom, the method comprising:

performing a separate Fourier Transform on the sampled signal, the separate Fourier Transform comprising a partial and/or reduced Fourier Transform to derive phase values for at least two points thereof;

determining, for each point, a phase variation corresponding to the difference between the phase values at different parts of an OFDM symbol separated by the useful part of the symbol;

compensating for an offset of the sampling frequency in dependence on the difference between the phase variations; and

compensating for an offset of a local oscillator frequency in dependence on at least one of the phase variations.

27. (Previously Presented) An OFDM receiver operable to perform a synchronising operation using the method as claimed in claim 26.

28. (Previously Presented) An OFDM receiver operable to compensate for sampling frequency offset using the method as claimed in claim 1.

29. (Previously Presented) An OFDM receiver operable to compensate for local oscillator frequency offset using the method as claimed in Claim 22.